What is claimed is:

1. A scanning optical system used for exposing a predetermined imaging area on a surface to be scanned to a plurality of laser beams, comprising:

a plurality of light sources that emit a plurality of laser beams having different wavelengths, respectively;

a single deflector which deflects the plurality of laser beams simultaneously;

an imaging optical system that converges the plurality of laser beams deflected by said single deflector on the surface to be scanned; and

a beam detector that receives the plurality of laser beams directed to outside of the predetermined imaging area via at least one of lens elements included in said imaging optical system, a synchronizing signal being generated upon detection of each of the plurality of light beams by said beam detector,

an optical characteristic of said imaging optical system being configured such that the laser beams directed to said predetermined imaging area are aligned in a scanning direction, while the laser beams directed to said beam detector are shifted in the scanning direction.

2. The scanning optical system according to claim 1,

wherein said single deflector comprises a polygonal mirror having a plurality of reflecting surfaces, one of said plurality of reflecting surfaces reflecting the plurality of laser beams at each scan, said polygonal mirror being rotated so that the laser beams reflected by said reflecting surface scan.

3. The scanning optical system according to claim 1, wherein said beam detector comprises a single light receiving element, each of the plurality of laser beams being incident on said single light receiving element.

4. The scanning optical system according to claim 1, wherein said imaging optical system includes at least one refractive lens element, and a diffractive lens structure formed onto said refractive lens element so that said imaging optical system exhibits said optical characteristic.

5. The scanning optical system according to claim 4, wherein said diffractive lens structure is formed in an predetermined area on a surface of said refractive lens, the laser beams directed to said imaging area passing through said predetermined area, the laser beams directed to said beam detector passing through an area outside said predetermined area of said refractive lens.

6. The scanning optical system according to claim 5, wherein said diffractive lens compensates for a lateral chromatic aberration of said at least one refractive lens.

7. A scanning optical system used for exposing a predetermined imaging area on a surface to be scanned, comprising:

a plurality of light sources that emit a plurality of laser beams having different wavelengths, respectively;

a single deflector which deflects the plurality of laser beams simultaneously;

an imaging optical system that converges the plurality of laser beams deflected by said single deflector on the surface to be scanned; and

a beam detector that receives the plurality of laser beams directed to outside of the predetermined imaging area via at least one optical element included in said imaging optical system,

said imaging optical system has a first range and a second range along a scanning direction, the laser beams directed to said imaging area passing through said first range, the laser beams directed to said beam detector passing through a second range, said imaging optical system being configured such that, within said first range, a

lateral chromatic aberration of said imaging optical system being compensated for, and that within said second range, a lateral chromatic aberration resides so that the plurality of laser beams are separated from each other in the scanning direction thereof.

8. The scanning optical system according to claim 7, wherein an optical characteristic of said imaging optical system, within said first range, is configured such that a plurality of beam spots respectively formed by the plurality of laser beams within said imaging area are aligned in the scanning direction, while the plurality of laser beams are incident on said beam detector at different timings.